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Date

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicants(s): Natasa Milic-Frayling, *et al.*

Serial No: 09/578,302

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Examiner: Mohammad Ali

Art Unit: 2167

Title: FACILITY FOR HIGHLIGHTING DOCUMENTS ACCESSED THROUGH SEARCH OR BROWSING

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Applicants' representative respectfully submits this brief in connection with an appeal of the above-identified patent application. A credit card payment form is filed concurrently herewith in connection with all fees due regarding this appeal brief. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [MSFTP240US].

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I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in the present appeal is Microsoft Corporation, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))

Appellants, appellants' legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))

Claims 1-11 and 96-108 have been withdrawn. Claims 12-95 stand rejected by the Examiner. The rejection of claims 12-95 is being appealed.

IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))

The Examiner has not entered the amendments submitted after the Final Office Action dated September 9, 2004. (*See* Advisory Action from Examiner dated Feb. 2, 2005).

V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))

A. Independent Claim 12

Independent claim 12 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to an independent search engine; receiving query results from the search engine; and generating information regarding relevancy of the query results based at least in part upon a user model and independent of the search engine. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27).

B. Claim 13

Claim 13 recites the method of claim 12, wherein the information is used to highlight relevant portions of text in the retrieved documents. (*See e.g.*, page 17, line 31-page 18, line 2).

C. Independent Claim 16

Independent claim 16 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to an independent search engine; creating a context based at least in part upon a user model; receiving query results from the search engine; and generating information regarding relevancy of the query results independent of the search engine and based upon the context. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 21, lines 4-7).

D. Independent Claim 18

Independent claim 18 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to a search engine separate from the computer; receiving query results from the search engine; enhancing the query based at least in part upon a user model; accessing documents identified by the query results; applying the enhanced query to the retrieved documents; and generating information regarding relevancy of the retrieved documents based on the enhanced query. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 20, line 30-page 21, line 25).

E. Claim 24

Claim 24 recites the method of claim 18, wherein the information is used to highlight relevant portions of text in the retrieved documents. (*See e.g.*, page 17, line 31-page 18, line 2).

F. Independent Claim 27

Independent claim 27 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to a search engine separate from the computer; receiving ranked query results from the search engine; accessing documents identified by the query results; re-ranking the query results based on information contained in the retrieved documents and upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 18, lines 16-23).

G. Independent Claim 29

Independent claim 29 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to a search engine separate from the computer; receiving ranked query results from the search engine; augmenting the query based at least in part upon a user model; and re-ranking the query results based on the augmented query. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 18, lines 16-23; page 20, line 30-page 21, line 25).

H. Independent Claim 30

Independent claim 30 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to an independent search engine; receiving query results from the search engine; retrieving a document; and scrolling to a most relevant portion of the retrieved document based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 18, lines 8-15).

I. Claim 31

Claim 31 recites the method of claim 30, wherein the document is divided into sections, and wherein a relevancy score is generated for each section. (*See e.g.*, page 21, line 27-page 22, line 4).

J. Claim 32

Claim 32 recites the method of claim 31 wherein the most relevant portion is the section with the highest score. (*See e.g.*, page 22, lines 4-7).

K. Claim 33

Claim 33 recites the method of claim 31 wherein one or more sections overlap other sections. (*See e.g.*, page 21, lines 30-31).

L. Claim 34

Claim 34 recites the method of claim 31 wherein each section is a paragraph. (*See e.g.*, page 21, lines 28-30).

M. Claim 35

Claim 35 recites the method of claim 31 wherein each section is a sentence. (*See e.g.*, page 21, lines 28-30).

N. Claim 36

Claim 36 recites the method of claim 31 wherein each section comprises a predetermined number of lines. (*See e.g.*, page 21, lines 28-30).

O. Independent Claim 38

Independent claim 38 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to an independent search engine; receiving query results from the search engine; retrieving a document identified in the query results; and extracting names from the document and identifying associated links to such names based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 23, line 15-page 24, line 11).

P. Claim 40

Claim 40 recites the method of claim 38 wherein the links are internal to the document. (*See e.g.*, page 23, lines 23-24).

Q. Claim 41

Claim 41 recites the method of claim 38 wherein the links are external to the document. (*See e.g.*, page 23, lines 32-31).

R. Claim 42

Claim 42 recites the method of claim 38 wherein the names are provided in a list next to the query results to help identify the relevance of documents. (*See e.g.*, page 23, lines 24-27).

S. Independent Claim 44

Independent claim 44 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to an independent search engine; receiving query results from the search engine; retrieving a document identified by such query results; and creating a thumbnail view of the document with portions of the view highlighted based on relevancy of corresponding portions of the document, such thumbnail view based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 24, line 12-page 25, line 15).

T. Claim 45

Claim 45 recites the method of claim 44 wherein the highlighted portions correspond to links back to corresponding portions of text in the document. (*See e.g.*, page 25, lines 6-7).

U. Independent Claim 53

Independent claim 53 recites a computer implemented method of enhancing query results provided independent of a search engine, the method comprising: sending a query to an independent search engine; receiving query results from the search engine; and retrieving a document identified by such query results; identifying relevant portions of the document based at least in part upon a user model; and generating a summary of the document comprising the most relevant portions identified, such summary portions based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 25, lines 16-25).

V. Claim 54

Claim 54 recites the method of claim 53, wherein the document is divided into sections, and wherein a relevancy score is generated for each section. (*See e.g.*, page 21, line 27-page 22, line 4).

W. Claim 55

Claim 55 recites the method of claim 54 wherein the most relevant portions are the sections with the highest score. (*See e.g.*, page 22, lines 4-7).

X. Claim 56

Claim 56 recites the method of claim 54 wherein each section is a sentence. (*See e.g.*, page 21, lines 28-30).

Y. Independent Claim 58

Independent claim 58 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to a search engine separate from the computer; a module that receives query results from the search engine; a module that retrieves documents identified by the query results; a module that enhances the query based at least in part upon a user model; a module that applies the enhanced query to the retrieved documents; and a module that generates information regarding relevancy of the retrieved documents based at least in part upon the enhanced query. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 20, line 30-page 21, line 25).

Z. Claim 64

Claim 64 recites the system of claim 58, wherein the information is used to highlight relevant portions of text in the retrieved documents. (*See e.g.*, page 17, line 31-page 18, line 2).

AA. Independent Claim 67

Independent claim 67 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to an independent search engine; a module that receives query results from the search engine; and a module that generates information regarding relevancy of the query results based at least in part upon a user model and independent of the search engine. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27).

BB. Claim 68

Claim 68 recites the system of claim 67, wherein the information is used to highlight relevant portions of text in the retrieved documents. (*See e.g.*, page 17, line 31-page 18, line 2).

CC. Independent Claim 69

Independent claim 69 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to an independent search engine; a module that creates a context based at least in part upon a user model; a module that receives query results from the search engine; and a module that generates information regarding relevancy of the query results independent of the search engine and based upon the context. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 21, lines 4-7).

DD. Independent Claim 71

Independent claim 71 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to a search engine separate from the computer; a module that receives query results from the search engine; a module that retrieves documents identified by the query results; a module that enhances the query based at least in part upon a user model; a module that applies the enhanced query to the retrieved documents; and a module that generates information regarding relevancy of the retrieved documents based on the enhanced query. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 20, line 30-page 21, line 25).

EE. Independent Claim 72

Independent claim 72 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to a search engine separate from the computer; a module that receives ranked query results from the search engine; a module that retrieves documents identified by the query results; a module that re-ranks the query results based on information contained in the retrieved documents and upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 18, lines 16-23).

FF. Independent Claim 73

Independent claim 73 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to a search engine separate from the computer; a module that receives ranked query results from the search

engine; a module that augments the query based at least in part upon a user model; and a module that re-ranks the query results based on the augmented query. (*See e.g.*, page 10, lines 15-page 11, line 6; page 12, lines 6-27; page 18, lines 16-23; page 20, line 30-page 21, line 25).

GG. Independent Claim 74

Independent claim 74 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to an independent search engine; a module that receives query results from the search engine; a module that retrieves a document; and a module that scrolls to a most relevant portion of the retrieved document based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 18, lines 8-15).

HH. Claim 75

Claim 75 recites the system of claim 74, wherein the document is divided into sections, and wherein a relevancy score is generated for each section. (*See e.g.*, page 21, line 27-page 22, line 4).

II. Claim 76

Claim 76 recites the system of claim 75 wherein the most relevant portion is the section with the highest score. (*See e.g.*, page 22, lines 4-7).

JJ. Claim 77

Claim 77 recites the system of claim 75 wherein one or more sections overlap other sections. (*See e.g.*, page 21, lines 30-31).

KK. Claim 78

Claim 78 recites the system of claim 75 wherein each section is a paragraph. (*See e.g.*, page 21, lines 28-30).

LL. Claim 79

Claim 79 recites the system of claim 75 wherein each section is a sentence. (*See e.g.*, page 21, lines 28-30).

MM. Claim 80

Claim 80 recites the system of claim 75 wherein each section comprises a predetermined number of lines. (*See e.g.*, page 21, lines 28-30).

NN. Independent Claim 81

Independent claim 81 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to an independent search engine; a module that receives query results from the search engine; a module that retrieves a document identified in the query results; and a module that extracts names from the document and identifying associated links to such names based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 23, line 15-page 24, line 11).

OO. Claim 83

Claim 83 recites the system of claim 81 wherein the links are internal to the document. (*See e.g.*, page 23, lines 23-24).

PP. Claim 84

Claim 84 recites the system of claim 81 wherein the links are external to the document. (*See e.g.*, page 23, lines 32-31).

QQ. Claim 85

Claim 85 recites the system of claim 81wherein the names are provided in a list next to the query results to help identify the relevance of documents. (*See e.g.*, page 23, lines 24-27).

RR. Independent Claim 86

Independent claim 86 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to an independent search engine; a module that receives query results from the search engine; a module that retrieves a document identified by such query results; and a module that creates a thumbnail view of the document with portions of the view highlighted based on relevancy of corresponding portions of the document, such thumbnail view based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 24, line 12-page 25, line 15).

SS. Claim 87

Claim 87 recites the system of claim 86 wherein the highlighted portions correspond to links back to corresponding portions of text in the document. (*See e.g.*, page 25, lines 6-7).

TT. Independent Claim 88

Independent claim 88 recites a computer system for enhancing query results provided independent of a search engine, the system comprising: a module that sends a query to an independent search engine; a module that receives query results from the search engine; and a module that retrieves a document identified by such query results; a module that identifies relevant portions of the document based at least in part upon a user model; and a module that generates a summary of the document comprising the most relevant portions identified, such summary portions based at least in part upon a user model. (*See e.g.*, page 10, lines 15-28; page 12, lines 6-27; page 25, lines 16-25).

UU. Claim 89

Claim 89 recites the system of claim 88, wherein the document is divided into sections, and wherein a relevancy score is generated for each section. (*See e.g.*, page 21, line 27-page 22, line 4).

VV. Claim 90

Claim 90 recites the system of claim 89 wherein the most relevant portions are the sections with the highest score. (*See e.g.*, page 22, lines 4-7).

WW. Claim 91

Claim 91 recites the system of claim 89 wherein each section is a sentence. (*See e.g.*, page 21, lines 28-30).

XX. Independent Claim 92

Independent claim 92 recites a computer implemented method of enhancing a query for an independent search engine, the method comprising: sending a query to an independent search engine; and independently modeling the query based at least in part upon a user model. (*See e.g.*, page 10, lines 15-25).

VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A. Whether claims 12-95 are unpatentable under 35 U.S.C. §103(a) over Kravets, *et al.* (US 6,363,377 B1) in view of Gottsman, *et al.* (US 6,134,548).

VII. Argument (37 C.F.R. §41.37(c)(1)(vii))

A. Rejection of Claims 12-95 Under 35 U.S.C. §103(a)

Claims 12-95 stand rejected under 35 U.S.C. §103(a) being unpatentable over Kravets, *et al.* (US 6,363,377 B1) in view of Gottsman, *et al.* (US 6,134,548). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Kravets, *et al.* and Gottsman, *et al.*, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention.

> To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to

> make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The subject invention relates to an information highlighting facility on a computer that assists the user in searching, browsing, and reading documents on the Web or similar distributed network environments. The information highlighting facility allows for a richer document presentation by incorporation of various types of query enhancement and document analysis based on a user model. For example, it can include relevancy information, terminology marking, scrolling, re-ranking, document thumbnailing, summarization, link analysis. In particular, as recited in independent claims 12 and 67, the applicants' claimed invention ***generates information regarding relevancy of the query results based at least in part upon a user model.*** Applicants' claimed invention can utilize a user model after the query to the independent search engine has returned results to produce information regarding the relevancy of the query results, such as by document link analysis, entity extraction from document, document section relevancy analysis, or any other criteria the user chooses. This provides a method to determine relevancy of the results using criteria that is different from the criteria used to generate the query.

Kravets, *et al.* discloses a tool for tuning queries, filtering results, and organizing results. Kravets, *et al.* does not teach or suggest generating information regarding relevancy of the query results based on a user model. In the section of prior art referenced by the Office Action dated November 9, 2004, Kravets, *et al.* teaches sending queries related and in parallel to the original query to increase likelihood of finding relevant information. This does not provide any information regarding relevancy of the *query results* as in applicants' claimed invention. In accordance with the cited reference, a user must go through query results using the results organizer tool and decide what is relevant. Moreover as conceded in the Office Action dated November 9, 2004, Kravets, *et al.* fails to teach a user model. (*See* page 2)

Gottsman, *et al.* discloses a system based upon a user model that employs agents to perform tasks for a user. The agents perform tasks such as comparison shopping, obtaining news content, and finding background information for an upcoming meeting. Gottsman, *et al.* applies the user model prior to executing the query to enhance the query with additional terms, or after a query to filter results and determine content layout preferences. However, Gottsman, *et al.* fails

to teach or suggest applying a user model after the query to provide relevancy information of the query results as taught in the subject claims. Kravets, *et al.* and Gottsman, *et al.* teach ranking query results based only upon frequency of query terms in each resulting document. In view of at least the foregoing, it is readily apparent that Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest ***generating relevancy information based upon a user model*** for documents that result from a query as taught in applicants' claimed invention.

Furthermore, independent claims 16 and 69 recite ***creating a context based at least in part upon a user model ... and generating information regarding relevancy of the query results independent of the search engine and based upon the context.*** The context is a rich representation of a user's preferences and information needs based at least in part upon a user model and includes factors such as user interest profiles, monitoring user actions, and tasks the user is currently performing. As discussed *supra* with respect to independent claims 12 and 67, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest generating relevancy information based upon a user model for documents that result from a query. Furthermore, the section of Kravets, *et al.* referenced in the prior art teaches a method for a user to save search results in context folders and then limit a future search to those saved context folders. Kravets, *et al.* fails to teach or suggest using the saved context folders to generate relevancy information for results of a future search. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest generating information regarding relevancy of the query results independent of the search engine and based upon the context.

Independent claims 18, 58, and 71 recite ***receiving query results from the search engine; enhancing the query based at least in part upon a user model; accessing documents identified by the query results; applying the enhanced query to the retrieved documents; and generating information regarding relevancy of the retrieved documents based on the enhanced query.*** Applicants' claimed invention can, subsequent to receiving query results from a search engine and based upon a user model, augment the query using techniques such as syntactic analysis, semantic expansion, and monitoring the user's task and then apply the enhances query to generate information regarding the document's relevance, such as highlighted terminology, document thumbnails, and document link analysis. As discussed above with respect to independent claims 12 and 67, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest generating relevancy information based upon a user model for documents that result from a

query. Furthermore, Kravets, *et al.* and Gottsman, *et al.* teach query enhancement with respect adding query terms prior to the search submitted to the independent search engine. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest receiving query results from the search engine; enhancing the query based at least in part upon a user model; accessing documents identified by the query results; applying the enhanced query to the retrieved documents; and generating information regarding relevancy of the retrieved documents based on the enhanced query.

Independent claims 27 and 72 recite ***re-ranking the query results based on information contained in the retrieved documents and upon a user model***. Accordingly, applicants' claimed invention can re-rank query results based upon the user model, by such factors as document source or advanced linguistic analysis. Kravets, *et al.* and Gottsman, *et al.* fail to teach usage of ***a user model for re-ranking results*** as in the subject claims. Rather, Kravets, *et al.* teaches ranking and re-ranking of the query results based only upon frequency of query terms in the results. Gottsman, *et al.* also teaches ranking of query results only by the frequency of query terms, and does not teach or suggest re-ranking of the query results by employment of a user model. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest re-ranking the query results based on information contained in the retrieved documents and upon a user model.

Independent claims 29 and 73 recite ***receiving ranked query results from the search engine*** and ***augmenting the query based at least in part upon a user model***. Applicants' claimed invention can employ the user model to enhance the query after query results have been returned from an independent search engine. Kravets, *et al.* and Gottsman, *et al.* fail to teach this novel feature of the subject claims. Kravets, *et al.* and Gottsman, *et al.* teach adding additional query terms prior to the initial search. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest receiving ranked query results from the search engine and augmenting the query based at least in part upon a user model.

Independent claims 30 and 74 recite ***scrolling to a most relevant portion of the retrieved document based at least in part upon a user model***. Applicants' claimed invention can automatically scroll to a relevant portion of a document as determined by the user model. Neither Kravets, *et al.* nor Gottsman, *et al.* teach or suggest this feature of the subject claims. Rather, Kravets, *et al.* merely produces a list of resulting documents from a query. The user

must open the document and manually scroll to the relevant portion. Gottsman, *et al.* is silent regarding scrolling to a relevant portion of the document.

Independent claims 38 and 81 recite ***extracting names from the document and identifying associated links to such names based at least in part upon a user model***. The subject invention can extract names, such as personal and corporate, from documents returned in the query results and provide links based upon a user model from those names to other information, such as relationships between a name and a company or to a corporate website associated with a name. Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest identifying links associated to names in a document as in applicants' claimed invention. Rather, the section of Kravets, *et al.* cited teaches ways to restrict or relax components of the user's query to fine tune the query. Further, Kravets, *et al.* teaches using an algorithm that tries to identify common sentences, phrases, or word within resulting documents to create clusters of documents with common themes. Gottsman, *et al.* teaches extracting names from a calendar appointment for use in generating a query for information associated with the appointment. However, none of these methods extracts names from the document in the query result and ***identifies links associated to such names based upon a user model*** as in applicants' claimed invention.

Furthermore dependent claims 40, 41, 83, and 84 describe various novel features related to links associated with names extracted from a document, which Kravets, *et al.* and Gottsman, *et al.* fail to teach as discussed above with respect to independent claims 38 and 81.

Independent claims 44 and 86 recite ***creating a thumbnail view of the document with portions of the view highlighted based on relevancy of corresponding portions of the document, such thumbnail view based at least in part upon a user model***. Applicants' claimed invention provides a means to access relevant information in a document more easily by creating a highlighted thumbnail view of the document based upon a user model. For example, this can be in the form of an abstract of the document with relevant terms or passages as determined by the user model highlighted in one or more colors and with hyperlinks to the respective sections of the full document. Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest these features of the subject claims. Rather, Kravets, *et al.* merely teaches a method for formulating queries related to the original query and providing a display indicating how many documents would result from each reformulated query. Kravets, *et al.* does not teach or suggest creating thumbnail views of documents, let alone one that has relevant portions highlighted based upon a user model

as disclosed in the subject invention. Gottsman, *et al.* is also silent regarding creating a thumbnail view and highlighting of a document.

Independent claims 53 and 88 recite ***identifying relevant portions of the document based at least in part upon a user model; and generating a summary of the document comprising the most relevant portions identified, such summary portions based at least in part upon a user model***. Applicants' claimed invention can locate relevant portions of a documents based upon factors in the user model, which can be different from the query terms, and use these portions to generate a summary of the document according to the user model. Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest these novel features of the subject claims. As noted *supra* with respect to independent claims 12 and 67, Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest employing a user model on the query results to determine relevancy of documents. Furthermore, Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest examining a document in portions using a user model to identify the relevant portions of the document. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest performing a relevance analysis of a document by employing a user model against portions of the document and then summarizing the document based upon the relevant portions identified. The section of Kravets, *et al.* cited teaches a method for formulating queries related to the original query and providing a display indicating how many documents would result from each reformulated query.

Independent claim 92 recites ***independently modeling the query based at least in part upon a user model***. Applicants' claimed invention can apply the user model to build a model independent from the query submitted to the search engine in order to perform any of the novel features of the information highlighting facility to assists the user in searching, browsing, and reading documents. Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest the novel feature of the subject claim. Kravets, *et al.* and Gottsman, *et al.* teach enhancing query terms prior to sending a query to an independent search engine.

Dependent claims 13, 24, 64 and 68 recite ***the information is used to highlight relevant portions of text in the retrieved documents***. Contrary to assertions in the Office Action dated November 9, 2004, Kravets *et al.* fails to discuss any highlighting of text. As discussed above with respect to independent claims 44 and 86, Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest highlighting portions of a document. The section of the cited prior art referenced in the Office Action refers to organizing results of a search into clusters of like documents. That

section fails to describe highlighting relevant text. Therefore, Kravets, *et al.* and Gottsman, *et al.* do not teach or suggest that the information is used to highlight relevant portions of text in the retrieved documents.

Claims 31, 54, 75, and 89 recites ***the document is divided into sections, and wherein a relevancy score is generated for each section***. Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest dividing a document into sections and generating a relevancy score for each section. The portion of the cited prior art referenced in the Office Action dated November 9, 2004 refers to counting the number of times the query terms show up in each document in the query result list to provide a ranking of the documents. The count is used for the entirety of each document, and therefore is not a relevancy score of one the divided ***sections*** of a document. Gottsman, *et al.* uses a method equivalent to Kravets, *et al.* to rank documents, and therefore is also silent regarding scoring sections of a document for relevancy.

Claims 32, 55, 76, and 90 recite ***the most relevant portions are the sections with the highest score***. Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest relevancy scoring of sections of a document as discussed *supra* with respect to claims 31, 54, 75 and 89. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest the most relevant portions are the sections with the highest score.

Claims 33-36, 56, 77-80, and 91 describe various novel aspects related to document section relevancy. Kravets, *et al.* and Gottsman, *et al.* fail to teach these novel features related to document section relevancy. The section of Kravets, *et al.* referenced in the Office Action dated November 9, 2004 refers to the user choosing to save a cluster of like documents into a search context folder and then being able to perform queries within those saved context folders. This is not related to document section relevancy. Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest relevancy scoring of sections of a document as discussed above with respect to claims 31, 54, 75 and 89.

Claims 42 and 85 recite ***the names are provided in a list next to the query results to help identify the relevance of documents***. Applicants' claimed invention extracts names from documents in the query results and then provides a list of names in a window next to the query results. Contrary to assertions in the Office Action dated November 9, 2004, Kravets *et al.* fails to teach providing a list of names extracted from documents next to the query results. The section of prior art referenced in the Office Action refers to tools for tuning a query or organizing

results into clusters of like documents. Gottsman, *et al.* also fails to teach or suggest the novel feature of the subject claims. Gottsman, *et al.* teaches using names extracted from a user's calendar to enhance a query. Therefore, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest names provided in a list next to the query results to help identify the relevance of documents as in applicants' claimed invention.

Claims 45 and 87 recites ***the highlighted portions correspond to links back to corresponding portions of text in the document***. As discussed *supra* with respect to claims 13, 24, 44 and 86, Kravets, *et al.* and Gottsman, *et al.* fail to teach or suggest highlighting of relevant text. Applicants' claimed invention is further able to provide a link from the highlighted text in a thumbnail of a document to the corresponding text in the full document, which Kravets, *et al.* and Gottsman, *et al.* also fail to teach or suggest.

In view of at least the above, it is respectfully submitted that Kravets, *et al.* and Gottsman, *et al.*, alone or in combination, do not teach or suggest applicants' claimed invention as recited in the independent claims (and claims which depend there from). Accordingly, reversal of this rejection is respectfully requested.

B. Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 12-95 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP240US].

Respectfully submitted,
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VIII. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

1-11 (Withdrawn)

12. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to an independent search engine;

receiving query results from the search engine; and

generating information regarding relevancy of the query results based at least in part upon a user model and independent of the search engine.

13. The method of claim 12, wherein the information is used to highlight relevant portions of text in the retrieved documents.

14. The method of claim 12, wherein documents are retrieved while a user that generated the query may performing other tasks.

15. A computer readable medium having instructions stored thereon that causes a computer to perform the method of claim 12.

16. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to an independent search engine;

creating a context based at least in part upon a user model;

receiving query results from the search engine; and

generating information regarding relevancy of the query results independent of the search engine and based upon the context.

17. The method of claim 16, wherein each new search within the context results in information being generated for documents identified by such search based upon such context.

18. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to a search engine separate from the computer;

receiving query results from the search engine;

enhancing the query based at least in part upon a user model;

accessing documents identified by the query results;

applying the enhanced query to the retrieved documents; and

generating information regarding relevancy of the retrieved documents based on the enhanced query.

19. The method of claim 18 wherein the query is enhanced based on linguistic analysis.

20. The method of claim 19 wherein the linguistic analysis comprises syntactic and semantic analysis.

21. The method of claim 18, wherein the query is enhanced based on a general interest profile.

22. The method of claim 21, wherein the general interest profile is applied equally to documents accessed by the user in both search and browsing modes.

23. The method of claim 18, wherein the query is enhanced based on a model of user interest generated independent of search results.

24. The method of claim 18, wherein the information is used to highlight relevant portions of text in the retrieved documents.

25. The method of claim 18, wherein the query is enhanced during retrieval of documents from their sources.

26. A computer readable medium having instructions stored thereon that cause a computer to perform the method of claim 18.

27. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to a search engine separate from the computer;

receiving ranked query results from the search engine;

accessing documents identified by the query results;

re-ranking the query results based on information contained in the retrieved documents and upon a user model.

28. A computer readable medium having instructions stored thereon that cause a computer to perform the method of claim 27.

29. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to a search engine separate from the computer;

receiving ranked query results from the search engine;

augmenting the query based at least in part upon a user model; and

re-ranking the query results based on the augmented query.

30. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to an independent search engine;

receiving query results from the search engine;

retrieving a document; and

scrolling to a most relevant portion of the retrieved document based at least in part upon a user model.

31. The method of claim 30, wherein the document is divided into sections, and wherein a relevancy score is generated for each section.

32. The method of claim 31 wherein the most relevant portion is the section with the highest score.

33. The method of claim 31 wherein one or more sections overlap other sections.

34. The method of claim 31 wherein each section is a paragraph.

35. The method of claim 31 wherein each section is a sentence.

36. The method of claim 31 wherein each section comprises a predetermined number of lines.

37. A computer readable medium having instructions stored thereon that cause a computer to perform the method of claim 30.

38. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to an independent search engine;

receiving query results from the search engine;

retrieving a document identified in the query results; and

extracting names from the document and identifying associated links to such names based at least in part upon a user model.

39. The method of claim 38 wherein the names comprise names of people or companies.

40. The method of claim 38 wherein the links are internal to the document.

41. The method of claim 38 wherein the links are external to the document.

42. The method of claim 38 wherein the names are provided in a list next to the query results to help identify the relevance of documents.

43. A computer readable medium having instructions stored thereon that cause a computer to perform the method of claim 38.

44. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to an independent search engine;

receiving query results from the search engine;

retrieving a document identified by such query results; and

creating a thumbnail view of the document with portions of the view highlighted based on relevancy of corresponding portions of the document, such thumbnail view based at least in part upon a user model.

45. The method of claim 44 wherein the highlighted portions correspond to links back to corresponding portions of text in the document.

46. The method of claim 44 and further comprising enhancing the query.

47. The method of claim 46 wherein the relevancy of the portions is determined based at least partially on the enhanced query.

48. The method of claim 46 wherein the query is enhanced based on linguistic analysis.

49. The method of claim 46, wherein the query is enhanced based on a general interest profile.

50. The method of claim 46, wherein the query is enhanced during retrieval of documents.

51. The method of claim 44, wherein documents are retrieved while a user that generated the query may performing other tasks.

52. A computer readable medium having instructions stored thereon that cause a computer to perform the method of claim 44.

53. A computer implemented method of enhancing query results provided independent of a search engine, the method comprising:

sending a query to an independent search engine;

receiving query results from the search engine; and

retrieving a document identified by such query results;

identifying relevant portions of the document based at least in part upon a user model; and

generating a summary of the document comprising the most relevant portions identified, such summary portions based at least in part upon a user model.

54. The method of claim 53, wherein the document is divided into sections, and wherein a relevancy score is generated for each section.

55. The method of claim 54 wherein the most relevant portions are the sections with the highest score.

56. The method of claim 54 wherein each section is a sentence.

57. A computer readable medium having instructions stored thereon that cause a computer to perform the method of claim 53.

58. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to a search engine separate from the computer;

a module that receives query results from the search engine;

a module that retrieves documents identified by the query results;

a module that enhances the query based at least in part upon a user model;

a module that applies the enhanced query to the retrieved documents; and

a module that generates information regarding relevancy of the retrieved documents based at least in part upon the enhanced query.

59. The system of claim 58 wherein the query is enhanced based on linguistic analysis.

60. The system of claim 59 wherein the linguistic analysis comprises syntactic and semantic analysis.

61. The system of claim 58, wherein the query is enhanced based on a general interest profile.

62. The system of claim 61, wherein the general interest profile is applied equally to documents accessed by the user in both search and browsing modes.

63. The system of claim 58, wherein the query is enhanced based on a model of user interest generated independent of search results.

64. The system of claim 58, wherein the information is used to highlight relevant portions of text in the retrieved documents.

65. The system of claim 58, wherein the query is enhanced during retrieval of documents.

66. The system of claim 58, wherein documents are retrieved while a user that generated the query may performing other tasks.

67. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to an independent search engine;

a module that receives query results from the search engine; and

a module that generates information regarding relevancy of the query results based at least in part upon a user model and independent of the search engine.

68. The system of claim 67, wherein the information is used to highlight relevant portions of text in the retrieved documents.

69. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to an independent search engine;

a module that creates a context based at least in part upon a user model;

a module that receives query results from the search engine; and

a module that generates information regarding relevancy of the query results independent of the search engine and based upon the context.

70. The system of claim 69, wherein each new search within the context results in information being generated for documents identified by such search based upon such context.

71. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to a search engine separate from the computer;

a module that receives query results from the search engine;

a module that retrieves documents identified by the query results;

a module that enhances the query based at least in part upon a user model;

a module that applies the enhanced query to the retrieved documents; and

a module that generates information regarding relevancy of the retrieved documents based on the enhanced query.

72. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to a search engine separate from the computer;

a module that receives ranked query results from the search engine;

a module that retrieves documents identified by the query results;

a module that re-ranks the query results based on information contained in the retrieved documents and upon a user model.

73. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to a search engine separate from the computer;

a module that receives ranked query results from the search engine;

a module that augments the query based at least in part upon a user model; and

a module that re-ranks the query results based on the augmented query.

74. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to an independent search engine;

a module that receives query results from the search engine;

a module that retrieves a document; and

a module that scrolls to a most relevant portion of the retrieved document based at least in part upon a user model.

75. The system of claim 74, wherein the document is divided into sections, and wherein a relevancy score is generated for each section.

76. The system of claim 75 wherein the most relevant portion is the section with the highest score.

77. The system of claim 75 wherein one or more sections overlap other sections.

78. The system of claim 75 wherein each section is a paragraph.

79. The system of claim 75 wherein each section is a sentence.

80. The system of claim 75 wherein each section comprises a predetermined number of lines.

81. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to an independent search engine;

a module that receives query results from the search engine;

a module that retrieves a document identified in the query results; and

a module that extracts names from the document and identifying associated links to such names based at least in part upon a user model.

82. The system of claim 81 wherein the names comprise names of people or companies.

83. The system of claim 81 wherein the links are internal to the document.

84. The system of claim 81 wherein the links are external to the document.

85. The system of claim 81wherein the names are provided in a list next to the query results to help identify the relevance of documents.

86. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to an independent search engine;

a module that receives query results from the search engine;

a module that retrieves a document identified by such query results; and

a module that creates a thumbnail view of the document with portions of the view highlighted based on relevancy of corresponding portions of the document, such thumbnail view based at least in part upon a user model.

87. The system of claim 86 wherein the highlighted portions correspond to links back to corresponding portions of text in the document.

88. A computer system for enhancing query results provided independent of a search engine, the system comprising:

a module that sends a query to an independent search engine;

a module that receives query results from the search engine; and

a module that retrieves a document identified by such query results;

a module that identifies relevant portions of the document based at least in part upon a user model; and

a module that generates a summary of the document comprising the most relevant portions identified, such summary portions based at least in part upon a user model.

89. The system of claim 88, wherein the document is divided into sections, and wherein a relevancy score is generated for each section.

90. The system of claim 89 wherein the most relevant portions are the sections with the highest score.

91. The system of claim 89 wherein each section is a sentence.

92. A computer implemented method of enhancing a query for an independent search engine, the method comprising:

sending a query to an independent search engine; and

independently modeling the query based at least in part upon a user model.

93. The method of claim 92 wherein the independently modeled query is applied to documents identified by the search engine.

94. The method of claim 92 wherein the independently modeled query comprises an enhanced representation selected from the group consisting of an original user description of the query, an augmented query, an original description of an interest profile, an enhanced description

of the interest profile, general interest profiles, and a query/interest profile combined with information about the user's task.

95. The method of claim 92 wherein the independently modeled query is applied to documents accessed in a browse mode.

96-108. (Withdrawn)

IX. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

X. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

None.